

Page 1 of 1

Form PTO-449 (MODIFIED) **U.S. DEPARTMENT OF COMMERCE**
PATENT AND TRADEMARK OFFICE

ATTY. DOCKET NO. 039153-0310 (P0797) **SERIAL NO.** 09/819,452

APPLICANT Calvin T. Gabriel et al

FILING DATE 01/28/2001 **GROUP/PORT UNITS** 2812

INFORMATION DISCLOSURE CITATION

(Use several sheets if necessary)

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB-CLASS | FILE NO. DATE APPLICABLE |
|------------------|-----|-----------------|----------|--------------------|-------|-----------|--------------------------|
| BT | | 08/819,342 | | Shields et al | | | 03/28/01 |
| | | 08/819,343 | | Gabriel et al | | | 03/28/01 |
| | | 09/819,344 | | Okoroanyanwu et al | | | 03/28/01 |
| | | 09/819,692 | | Okoroanyanwu et al | | | 03/28/01 |
| | | 09/820,143 | | Okoroanyanwu et al | | | 03/28/01 |
| | | 6,107,172 | 08/22/00 | Yang et al | 438 | 585 | |
| | | 6,103,457 | 08/15/00 | Gabriel | 430 | 318 | |
| | | 5,965,461 | 10/12/99 | Yang et al | 438 | 717 | |
| BT | | 5,003,178 | 03/26/91 | Livesay | 250 | 492.300 | |

FOREIGN PATENT DOCUMENTS

| REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION | |
|-----|-----------------|------|---------|-------|-----------|-------------|----|
| | | | | | | YES | NO |
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| | |
|----|--|
| BT | Livesay, W. R., "Large-area electron-beam source," Journal of Vacuum Science & Technology B, Vol. 11, No. 8, Nov./Dec. 1993, pp. 2304-2308, American Vacuum Society |
| BT | Yang, J. J. et al, "Electron Beam Processing for Spin-on Polymers and its Applications to Back-End-of-Line (BEOL) Integration," Materials Research Society Symposium Proceedings, Vol. 511, 1988, pp. 49-55, Materials Research Society |
| BT | Ross et al, "Plasma Etch Characteristics of Electron Beam Processed Photoresist," The Society of Photo-Optical Instrumentation Engineers, Vol. 2438, 1985, pp. 803-816, SPIE-The International Society for Optical Engineering |
| BT | Grün, Von A. E., "Lumineszenz-photometrische Messungen der Energieabsorption im Strahlungsfeld von Elektronenquellen Eindimensionaler Fall in Luft," Zeitschrift für Naturforschung, Vol. 12a, 1957, pp. 89-95, Publisher: Zeitschrift für Naturforschung; full English Translation attached (11 pgs.) |

EXAMINER Binh Tran **DATE CONSIDERED** 10/31/03

• **EXAMINER:** Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include any copy of this form with next communication to applicant.

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| Form PTO-1449 (MODIFIED) | U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE | ATTY. DOCKET NO. 039153-0310 (P0797) | SERIAL NO. 09/819,552 |
| INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) | | APPLICANT Calvin T. Gabriel et al. | |
| | | FILING DATE 03/28/2001 | GROUP ART UNIT 2812 |

U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB- CLASS | FILING DATE IF APPROPRIATE |
|---------------------|-----|--------------------|------------|------------|-------|---------------|----------------------------------|
| BT | A1 | 6,197,687 | 3/06/2001 | Buyoski | | | |
| | A2 | 5,994,225 | 11/30/99 | Liu et al. | | | |
| | A3 | 5,876,903 | 3/02/99 | Ng et al. | | | |
| BT | A4 | 5,468,595 | 11/21/1995 | Livsey | | | |
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FOREIGN PATENT DOCUMENTS

| REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB- CLASS | TRANSLATION YES NO |
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

| | | |
|----|----|--|
| BT | A5 | Chiong K.G. et al. "Resist Contrast Enhancement in High Resolution Electron Beam Lithography", Journal of Vacuum Science and Technology: Part B, American Institute of Physics, New York, US, vol. 7, no. 6. |
| BT | A6 | Patent Abstracts of Japan, vol 1999, no. 09, 30 July 1999 (1999-07-30) & JP 11 097328 A (Toshiba Corp), 9 April 1999 (1999-04-09) abstract |
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Page 1 of 1

ATTY. DOCKET NO. 039153-310 (P0797) SERIAL NO. 09/819,552

INFORMATION DISCLOSURE CITATION

APPLICANT Calvin T. Gabriel et al.

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U.S. PATENT DOCUMENTS

| EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB-CLASS | FILING DATE IF APPROPRIATE |
|------------------|-----|-----------------|------------|-----------------|-------|-----------|----------------------------|
| BT | A1 | 6,232,048 | 5/15/2001 | Buynoski et al. | | | |
| BT | A2 | 6,197,687 | 3/5/01 | Buynoski | | | |
| I | A3 | 6,110,837 | 8/29/00 | Linliu et al. | | | |
| | A4 | 5,876,903 | 3/2/99 | Ng et al. | | | |
| V | A5 | 5,408,595 | 11/21/95 | Livesay | | | |
| BT | A6 | 3,997,367 | 12/14/1976 | Yau | | | |

FOREIGN PATENT DOCUMENTS

| REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB-CLASS | TRANSLATION YES | TRANSLATION NO |
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|--|--------------------|--|------------|---|---------------|--------------------------|----------------------------------|
| INFORMATION DISCLOSURE CITATION (Use several sheets if necessary) | | | | APPLICANT Uzodinma Okoroanyanwu et al. | | | |
| | | | | FILING DATE 03/28/2001 | | GROUP ART UNIT 2012 | |
| U.S. PATENT DOCUMENTS | | | | | | | |
| EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB- CLASS | FILING DATE IF APPROPRIATE |
| B7 | A1 | 6,420,097 | 07/16/2002 | Pike et al. | 430 | 313 | |
| B7 | A2 | 8,395,447 | 05/28/2002 | Ishii et al. | 430 | 191 | |
| | A3 | 6,358,870 | 03/19/2002 | Wong et al. | 430 | 286 | |
| | A4 | 6,319,655 | 11/20/2001 | Wong et al. | 430 | 311 | |
| | A5 | 6,200,903 | 03/13/2001 | Oh et al. | 438 | 705 | |
| | A6 | 6,174,818 | 01/16/2201 | Tao et al. | 438 | 733 | |
| | A7 | 5,962,195 | 10/05/1999 | Yen et al. | 430 | 316 | |
| | A8 | 4,446,222 | 05/01/1984 | Kress | 430 | 307 | |
| B7 | A9 | 4394,211 | 07/19/1983 | Uchiyama et al. | 156 | 628 | |
| FOREIGN PATENT DOCUMENTS | | | | | | | |
| REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB- CLASS | TRANSLATION YES NO | |
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Page 1 of 1

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| <div style="border: 1px solid black; border-radius: 50%; padding: 5px; display: inline-block;"> OIP SEP 28 2003 U.S. PATENT & TRADEMARK OFFICE </div> | | | | INFORMATION DISCLOSURE CITATION | | | |
| | | | | <div style="display: flex; justify-content: space-between;"> APPLICANT Calvin T. Gabriel et al. FILING DATE 03/28/2001 GROUP PART UNIT 2812 </div> | | | |
| U.S. PATENT DOCUMENTS | | | | | | | |
| EXAMINER INITIAL | REF | DOCUMENT NUMBER | DATE | NAME | CLASS | SUB- CLASS | FILING DATE IF APPROPRIATE |
| BT | A1 | 6,589,709 | 7/08/2003 | Okoroanyanwu et al. | 430 | 286 | |
| | A2 | 6,444,381 | 9/03/2002 | Singh et al. | 430 | 30 | |
| | A3 | 6,420,702 | 7/16/2002 | Tripsas et al. | 250 | 310 | |
| | A4 | 6,143,666 | 11/07/2000 | Lin et al. | 438 | 725 | |
| | A5 | 6,121,130 | 9/18/2000 | Chua et al. | 438 | 623 | |
| | A6 | 5,928,821 | 7/27/1999 | Gardly et al. | 430 | 23 | |
| | A7 | 5,783,398 | 7/21/1998 | Chen et al. | 430 | 311 | |
| | A8 | 5,747,803 | 05/05/1998 | Doong, Yih-Yuh | 250 | 307 | |
| | A9 | 5,510,216 | 04/23/1996 | Calabrese et al. | 430 | 16 | |
| | A10 | 5,242,884 | 09/07/1993 | Fassberg et al. | 438 | 701 | |
| FOREIGN PATENT DOCUMENTS | | | | | | | |
| REF | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB- CLASS | TRANSLATION | |
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